

FILE 'CAPLUS' ENTERED AT 14:31:29 ON 04 MAY 2004

L1 906 TOYOOKA?/AU

L2 1 L1 AND ANALYTICAL CHEM?/JT

L2 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2004 ACS on STN

T1 New fluorogenic reagent having halogenobenzofurazan structure for thiols: 4-(aminosulfonyl)-7-fluoro-2,1,3-benzoxadiazole

=> file scisearch

=> s L2 <cit>

SmartSELECT INITIATED

SEL L2 1- CIT

L3 SEL L2 1- CIT : 1 TERM

SET SMARTSELECT OFF

SET COMMAND COMPLETED

FILE 'SCISEARCH' ENTERED AT 14:34:46 ON 04 MAY 2004

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S L3

L4 114 L3

=> file registry

=> e L4

E1 4 L3T4.25/BI

E2 4 L3T425/BI

E3 482 --> L4/BI

E4 1 L4,1/BI

E5 2 L4.13.2/BI

E6 36 L40/BI

E7 62 L400/BI

E8 1 L4000/BI

E9 3 L40000/BI

E10 2 L40001/BI

E11 2 L40002/BI

E12 2 L40003/BI

L5 482 "L4"/BI

L5 ANSWER 1 OF 482 REGISTRY COPYRIGHT 2004 ACS on STN

RN 669025-55-2 REGISTRY

CN Protein L4 (Ixodes scapularis salivary gland) (9CI) (CA INDEX NAME)

OTHER NAMES:

CN 16: PN: WO2004019883 TABLE: 2 claimed protein

FS PROTEIN SEQUENCE

MF Unspecified

CI MAN

SR CA

LC STN Files: CA, CAPLUS

=> sel L5 name

E13 THROUGH E999 ASSIGNED

=> index bioscience

INDEX 'ADISCTI, ADISINSIGHT, ADISNEWS, AGRICOLA, ANABSTR, AQUASCI, BIOBUSINESS, BIOCOMMERCE, BIOSIS, BIOTECHABS, BIOTECHDS, BIOTECHNO, CABA, CANCERLIT, CAPLUS, CEABA-VTB, CEN, CIN, CONFSCI, CROPB, CROPU, DISSABS, DDFB, DDFU, DGENE, DRUGB, DRUGMONOG2, ...' ENTERED AT 14:44:15 ON 04 MAY 2004

L6 QUE L5 64 FILES HAVE ONE OR MORE ANSWERS

L7 QUE TOYOOKA?/AU 41 FILES HAVE ONE OR MORE ANSWERS

L8 QUE L7 AND ANALYTICAL CHEM?/JT 4 FILES HAVE ONE OR MORE ANSWERS

= > file registry

L9 5 DANSYLAMIDE

L9 ANSWER 1 OF 5 REGISTRY COPYRIGHT 2004 ACS on STN

RN 76587-46-7 REGISTRY

CN 1-Naphthalenesulfonamide, N-chloro-5-(dimethylamino)- (9CI) (CA INDEX NAME)

OTHER NAMES:

CN N-Chlorodansylamide

FS 3D CONCORD

MF C12 H13 Cl N2 O2 S

CI COM

LC STN Files: BIOSIS, CA, CAPLUS

= > sel L9 name

HIGHEST E# ASSIGNED. SELECT NOT VALID.

= > index bioscience

L10 QUE L9 34 FILES HAVE ONE OR MORE ANSWERS

L11 QUE (RN76587-46-7) OR (1-NAPHTHALENESULFONAMIDE) OR DANSYLAMIDE OR (N-CHLORODANSYLAMIDE) OR FLUOROPHORE OR (PHOTOLUMINISCENT COMPOUND) 55 FILES

HAVE ONE OR MORE ANSWERS

L12 QUE APOCARBONIC ANHYDRASE 24 FILES HAVE ONE OR MORE ANSWERS

L13 QUE L11 AND L12 5 FILES HAVE ONE OR MORE ANSWERS

L14 QUE (L9 AND L10) AND L11 34 FILES HAVE ONE OR MORE ANSWERS

L15 QUE L8 AND L12 0 FILES HAVE ONE OR MORE ANSWERS

L16 QUE L12 AND L14 5 FILES HAVE ONE OR MORE ANSWERS

L17 QUE L5 AND L12 0 FILES HAVE ONE OR MORE ANSWERS

L18 QUE L5 AND L14 0 FILES HAVE ONE OR MORE ANSWERS

L19 QUE L12 AND L14 5 FILES HAVE ONE OR MORE ANSWERS

= > d rank

F1 4 USPATFULL

F2 2 CAPLUS

F3 1 MEDLINE

F4 1 PASCAL

F5 1 SCISEARCH

= > file f1-f3, f5

L20 3 L19

L21 3 DUP REM L20 (0 DUPLICATES REMOVED)

L21 ANSWER 1 OF 3 SCISEARCH COPYRIGHT 2004 THOMSON ISI on STN

AN 2000:105031 SCISEARCH

GA The Genuine Article (R) Number: 279WW

TI Zinc biosensing with multiphoton excitation using carbonic anhydrase and improved fluorophores

AU Thompson R B (Reprint); Maliwal B P; Zeng H H

CS UNIV MARYLAND, SCH MED, DEPT BIOCHEM & MOL BIOL, 108 N GREENE ST, BALTIMORE, MD 21201 (Reprint)

CYA USA

SO JOURNAL OF BIOMEDICAL OPTICS, (JAN 2000) Vol. 5, No. 1, pp. 17-22.

Publisher: SPIE-INT SOCIETY OPTICAL ENGINEERING, 1000 20TH ST, BELLINGHAM, WA 98225.

ISSN: 1083-3668.

DT Article; Journal

FS LIFE; ENGI

LA English

REC Reference Count: 18

ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB Previously, we had shown that the zinc-dependent binding of certain fluorescent aryl sulfonamide inhibitors could be used with

apocarbonic anhydrase II to transduce the level of free zinc as a change in the fluorescence of the inhibitor. While inhibitors such as dansylamide, ABD-M, and ABD-N made possible quantitation of free zinc in the picomolar range with high selectivity, they have only modest absorbance which limits their utility. We describe here the synthesis and properties of two new probes, Dapoxyl(TM) sulfonamide and BTCS, and their use in zinc biosensing. Dapoxyl sulfonamide exhibits a dramatic increase and blue shift in its emission upon binding to holocarbonic anhydrase II, as well as a 20-fold increase in lifetime: it is thus well suited for quantitating free Zn(II) down to picomolar ranges. The anisotropy of BTCS increases fivefold upon binding to the holoprotein, making this probe well suited for anisotropy-based determination of zinc. BTCS and ABD-N are efficiently excited with two photon excitation using 1.5 ps pulses from a titanium sapphire laser, and exhibit the increased zinc-dependent anisotropy response anticipated on the basis of photoselection. (C) 2000 Society of Photo-Optical Instrumentation Engineers. [S1083-3668(00)00201-X].

L21 ANSWER 2 OF 3 USPATFULL on STN

AN 96:72765 USPATFULL

TI Selective metal ion detection using a photoluminescent indicator binding to a macromolecule-metal ion complex

IN Thompson, Richard B., Baltimore, MD, United States

Jones, Eric R., Honolulu, HI, United States

PA The United States of America as represented by the Secretary of the Navy, Washington, DC, United States (U.S. government)

PI US 5545517 19960813

AI US 1994-213409 19940315 (8)

DT Utility

FS Granted

EXNAM Primary Examiner: Chan, Christina Y.; Assistant Examiner: Mohamed, Abdel A.

LREP McDonnell, Thomas E., Karasek, John J.

CLMN Number of Claims: 6

ECL Exemplary Claim: 1

DRWN 10 Drawing Figure(s); 6 Drawing Page(s)

LN.CNT 663

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention is a process and apparatus for metal ion detection. The process of the invention has the steps of (1) disposing, in an analyte medium, a macromolecule suitable for selective complexation with the target metal ion species; (2) disposing, in the analyte medium, an appropriate photoluminescent indicator that will emit in a measurably different manner when bound to the metallomacromolecule complex, compared with its unbound state; (3) exciting the photoluminescent indicator species; and (4) monitoring the emission of the photoluminescent indicator species to detect changes in its emission. The apparatus of the invention has (1) a macromolecule suitable for selective complexation with the target metal ion species disposed in an analyte medium; (2) an appropriate photoluminescent indicator that will emit in a measurably different manner when bound to the metallomacromolecule complex, compared with its unbound state, also disposed in the analyte medium; (3) a source for exciting the photoluminescent indicator species; and (4) a detector for monitoring the emission of the photoluminescent indicator species to detect changes in its emission.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L21 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1995:706822 CAPLUS

DN 123:137737

TI Energy transfer-based fiber optic metal ion biosensor

AU Thompson, Richard B.; Ge, Zhengfang; Patchan, Marcia W.; Fierke, Carol A.

CS School Medicine, University Maryland, Baltimore, MD, 21201, USA

SO Proceedings of SPIE-The International Society for Optical Engineering
(1995), 2388(Advances in Fluorescence Sensing Technology II), 138-47
CODEN: PSISDG; ISSN: 0277-786X

PB SPIE-The International Society for Optical Engineering

DT Journal

LA English

AB Recently, the authors have demonstrated a fluorescence-based fiber optic biosensor for zinc in aq. solns. Binding of zinc to the active site of human apocarbonic anhydrase II is transduced by subsequent binding of a fluorescent inhibitor, dansylamide, to the zinc in situ, resulting in large changes in the wavelength, quantum yield and lifetime of the dansylamide emission. These fluorescence changes can be readily measured through optical fiber, and yield subnanomolar detection limits and 50 dB dynamic range with excellent selectivity. However, the dansylamide is only excitable in the UV, a spectral regime where fiber optic attenuation is very high; longer wavelength fluorescent inhibitors akin to dansylamide are not yet available. Thus the authors chose a different transduction scheme wherein the enzyme is labeled with a suitable fluorescent tag and the inhibitor is colored, absorbing in the visible region. When zinc is bound the inhibitor can then bind, bringing it in close proximity to the fluorescent tag and allowing energy transfer to occur; the energy transfer can be followed by changes in intensity or, preferably, lifetime. Recent results using gas laser and laser diode excitation will be shown.